

Serial No.: 09/895,160

Atty. Docket No.: 21499/00048-US

AMENDMENTS TO THE CLAIMS:

Please amend claims 1, 13, and 40 as follows:

1. (Currently Amended) A method of manufacturing a paper of mono- and multi-colour ink-jet printable grade by de-watering a paper web from fiber pulp slurry, said method containing a step of adding a 2-oxetanone based size to said pulp slurry, wherein said 2-oxetanone contains a plurality of groups from a plurality of fatty acids, wherein each fatty acid group is a saturated fatty acid group consisting of a main chain having 6-22 carbons linked by saturated bonds, wherein at least one said fatty acid group comprises a branched chain.

2. (Previously Presented) The method of claim 1, wherein said 2-oxetanone size is made from a mixture of saturated linear-chain and saturated branched-chain fatty acids.

3. (Previously Presented) The method of claim 1, wherein said 2-oxetanone size is made from a mixture of saturated fatty acids with the proportion of linear-chain and branched-chain fatty acids in the order of 1 to 1.

4. (Previously Presented) The method of claim 1, wherein the 2-oxetanone size is made from a mixture of fatty acids wherein said at least one branched-chain fatty acid comprises at least 40% of said mixture.

5. (Previously Presented) The method of claim 1, wherein said at least one branched-chain fatty acid is isostearic acid.

Serial No.: 09/895,160

Atty. Docket No.: 21499/00048-US

6. (Original) The method of claim 1, wherein the 2-oxetanone size is added in an amount of 0.05 to 0.25 of the fiber weight in the pulp slurry.

7. (Original) The method of claim 1 including further a step of adding a hydrophobizing size onto the de-watered web.

8. (Original) The method of claim 1 including further a step of adding a mineral filler material to the slurry.

9. (Original) The method of claim 8, wherein the filler material is calcium carbonate.

10. (Original) The method of claim 8, wherein the filler material is precipitated calcium carbonate.

11. (Original) The method of claim 1 conducted under neutral conditions.

12. (Original) The method of claim 1 conducted under alkaline conditions.

13. (Currently Amended) A method of manufacturing a paper of mono- and multi-colour ink-jet printable grade from fiber pulp slurry into a paper web, the method containing a step of adding a size onto the paper web, wherein the size is a 2-oxetanone based size wherein said 2-oxetanone contains a plurality of groups from a plurality of fatty acids, wherein each fatty acid group is a saturated fatty acid group consisting of a main chain having 6-22 carbons linked by

Serial No.: 09/895,160

Atty. Docket No.: 21499/00048-US

saturated bonds, and wherein at least one said fatty acid group comprises a branched chain.

14. (Original) The method of claim 13, wherein said 2-oxetanone is made from a mixture of a linear-chain and a branched-chain fatty acids.

15. (Original) The method of claim 13, wherein the 2-oxetanone size is made from a mixture of fatty acids with the proportion of linear-chain and branched -chain fatty acids in the order of 1 to 1.

16. (Original) The method of claim 13, wherein the 2-oxetanone size is made from a mixture of fatty acids with a fatty acid proportion of 40% or higher of the at least one branched-chain fatty acid.

17. (Original) The method of claim 13, wherein the at least one branched-chain fatty acid is isostearic acid.

18. (Original) The method of claim 13, wherein the 2-oxetanone size is added in an amount of 0.05 to 0.25 of the fiber weight in the pulp slurry.

19. (Original) The method of claim 13, including further a stock sizing step where a 2-oxetanone based stock size is used which is manufactured from greater number than one of fatty acids, the acids having a main chain comprising 6 to 22 carbons linked to each other by saturated bonds, and of which acids at least one is an acid with a branched chain.

20. (Original) The method of claim 13 further including a step of adding a filler material into the pulp slurry.

Serial No.: 09/895,160

Atty. Docket No.: 21499/00048-US

21. (Original) The method of claim 20, wherein the filler material is calcium carbonate.

22. (Original) The method of claim 20, wherein the filler material is precipitated calcium carbonate.

23. (Original) The method of claim 13 conducted under neutral conditions.

24. (Original) The method of claim 13 conducted under alkaline conditions.

25. (Original) A paper grade made using the method of claim 1.

26. (Original) A paper grade made using the method of claim 13.

27-39. (Cancelled).

40. (Currently Amended) A 2-oxetanone based paper size wherein said 2-oxetanone contains a plurality of groups from a plurality of fatty acids, wherein each fatty acid group is a saturated fatty acid group consisting of a main chain having 6-22 carbons linked by saturated bonds, and at least 40% of the chains including a branching.

41. (Original) A 2-oxetanone based paper size of claim 40 wherein 40 to 60% of said fatty acids have a branched main chain.

Serial No.: 09/895,160

Atty. Docket No.: 21499/00048-US

42. (Original) A 2-oxetanone based paper size of claim 40 wherein said fatty acid with the branched main chain is isostearic acid.